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December 14, 2007

Ms. Ashley A. Holt  
Tennessee Department of Environment and Conservation (TDEC)  
Division of Solid Waste Management - State Remediation Program  
Fifth Floor, L & C Tower  
401 Church Street  
Nashville, Tennessee 37243

RE: Proposed Air Monitoring Near Liberty Creek in Franklin, Tennessee

Dear Ms. Holt:

On behalf of Egyptian Lacquer Manufacturing Company, Inc. (ELMCO), through its attorneys Stites and Harbison, PLLC (Stites), we are submitting herewith a plan for additional air monitoring as required by the Notice of Deficiency (NOD) issued to ELMCO by TDEC during November 2007. In response to this requirement, and in consideration of the discussions during our meeting with representative of TDEC and the Tennessee Department of Health on December 5, 2007, EnSafe Inc. is proposing the air monitoring activities described below.

We propose to collect time-integrated (7-day) air samples from the 5 locations shown on the attached figure. These sampling locations were selected considering the location of the Liberty Creek seep relative to nearby potential receptors at Battle Ground Academy (BGA) Lower School and at the residences along Daniels Drive, and also in consideration of prevailing seasonal wind patterns. More specifically, wind rose diagrams for the Nashville, Tennessee area (see attached) indicate that the prevailing winds are out of the south (blowing toward the north) throughout most years. As such, time-integrated samples are proposed for collection at locations north, east, and west of the primary seep on Liberty Creek, as shown on the attached figure, and also north of the Harpeth River, south of the residences on Daniels Drive. The sampling locations west of Liberty Creek will be just east of the BGA Lower School's fence, and those east of Liberty Creek will be just west of the backyard fences of the residences along the west side of Daniels Drive. Samples will be collected from the hypothetical breathing zone (~3-5 feet above ground). The actual sample locations will be marked and their locations determined using a hand-held global positioning system unit.

3M organic vapor diffusion monitors (3M 3520) are proposed for use to collect samples. These monitors incorporate 2 charcoal adsorbent pads to minimize the possibility of sampler overloading. Samples will be collected and handled in accordance with the procedures described in 3M's Air Monitoring Guide (copy attached). Samples will be shipped to Galson Laboratories, an AIHA-accredited laboratory, to be analyzed for toluene and acetone via modified versions of National Institute for Occupational Safety and Health (NIOSH) Methods 1500 and 1300, respectively.

The results from analysis of the time-integrated samples described above will be compared against the Minimal Risk Levels (MRLs) published by the Agency for Toxic Substances and Disease Registry. Reference concentrations against which the results will be compared are as follows:

<b>Reference Criteria*</b>			
<u>Compound</u>	<u>Acute</u>	<u>Intermediate</u>	<u>Chronic</u>
Toluene	1.0 ppm	None established	0.08 ppm
Acetone	26 ppm	13 ppm	13 ppm

\*Acute (1 – 14 days), Intermediate (>14 – 364 days), Chronic (≥365 days)

### **Schedule**

It is proposed that 7-day time-integrated samples be collected over 4 consecutive weeks, starting in January. Within 10 working days of receipt of the January time-integrated sample results, we propose to request a meeting with TDEC to discuss the results. If representatives of TDEC and ELMCO concur that the January results do not indicate a need for more immediate sampling, it is proposed that 7-day time-integrated samples be collected during one week in each of the months April, July and October. The proposed schedule is contingent upon weather and is based upon the presumption that property access will not be problematic.

### **Reporting**

We propose to provide TDEC with a tabular summary of the January sampling results during the above-referenced meeting. Within 15 working days of receipt of the October sampling results, we propose to submit to TDEC a summary report of all 2008 sampling. This report will include a tabular summary of the monitoring results along with copies of the laboratory analytical results, and relevant information regarding area meteorological conditions for the dates sampled (e.g., temperature, wind speed and direction, relative humidity) as available from the National Weather Service station in Nashville, Tennessee. We also propose to provide interim status reports (including copies of analytical reports) to TDEC within 10 working days of receipt of results for each sampling event.

Following submittal of the aforementioned summary report, ELMCO representatives will review the results of the monitoring with TDEC representatives at a meeting scheduled at the convenience of SRP to evaluate what — if any — further monitoring is necessary.

We believe this plan complies with the air monitoring requirements as we understand them from the NOD. Please contact attorney William L. Penny with Stites should you need additional information.

Sincerely,



By: Bry Roberson, CIH, CHMM  
Associate Principal

### **Attachments**

cc: Bonnie Bashor, Tennessee Department of Health  
Brenda Apple, TDEC  
William L. Penny, Esq., Stites & Harbison, PLLC  
Dwight Hinch, TriAD, Inc.

# Air Monitoring Locations

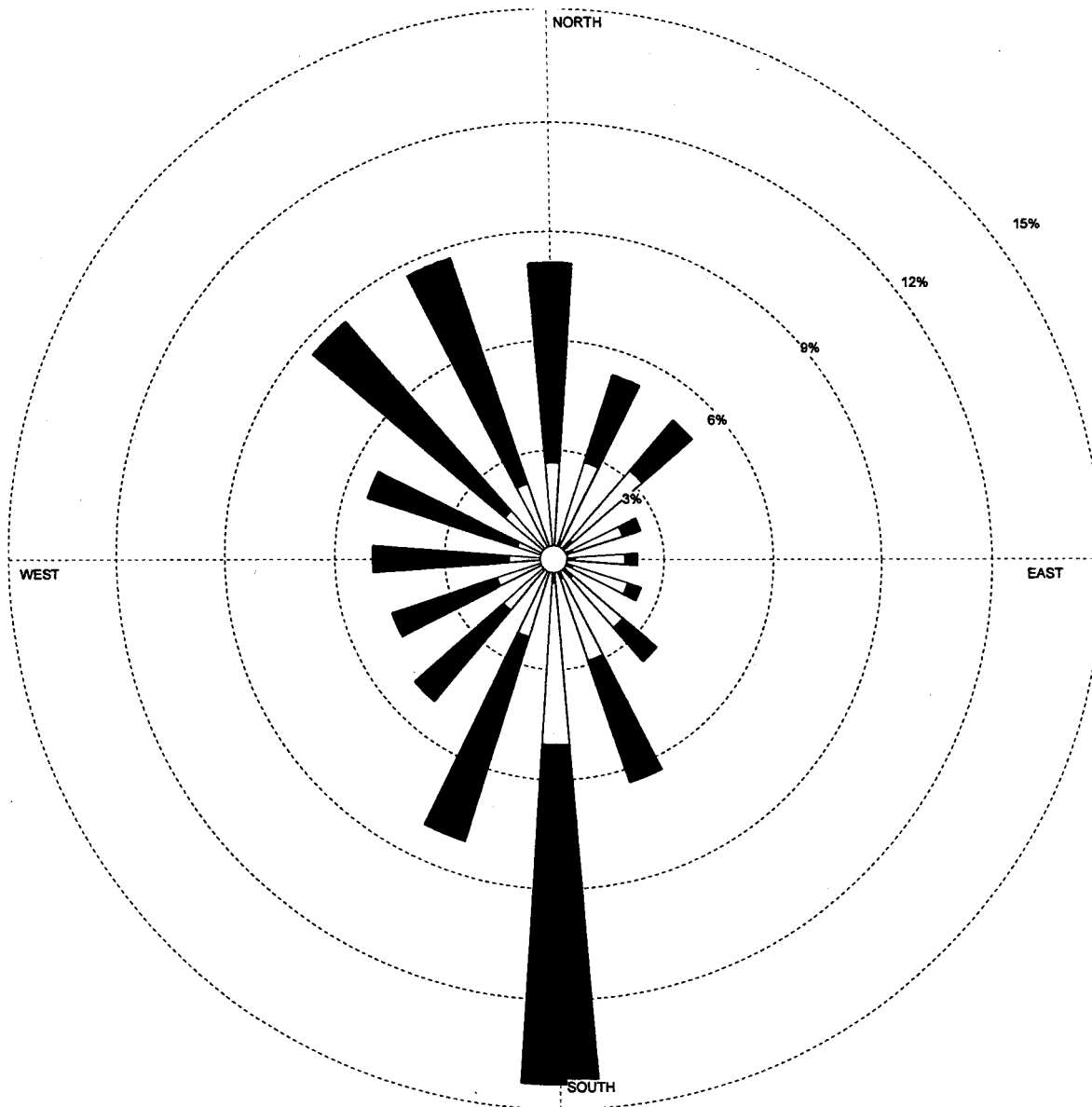


○ - Sampling Location

**Attachment 1**  
**Wind Rose Diagrams**

## WIND ROSE PLOT

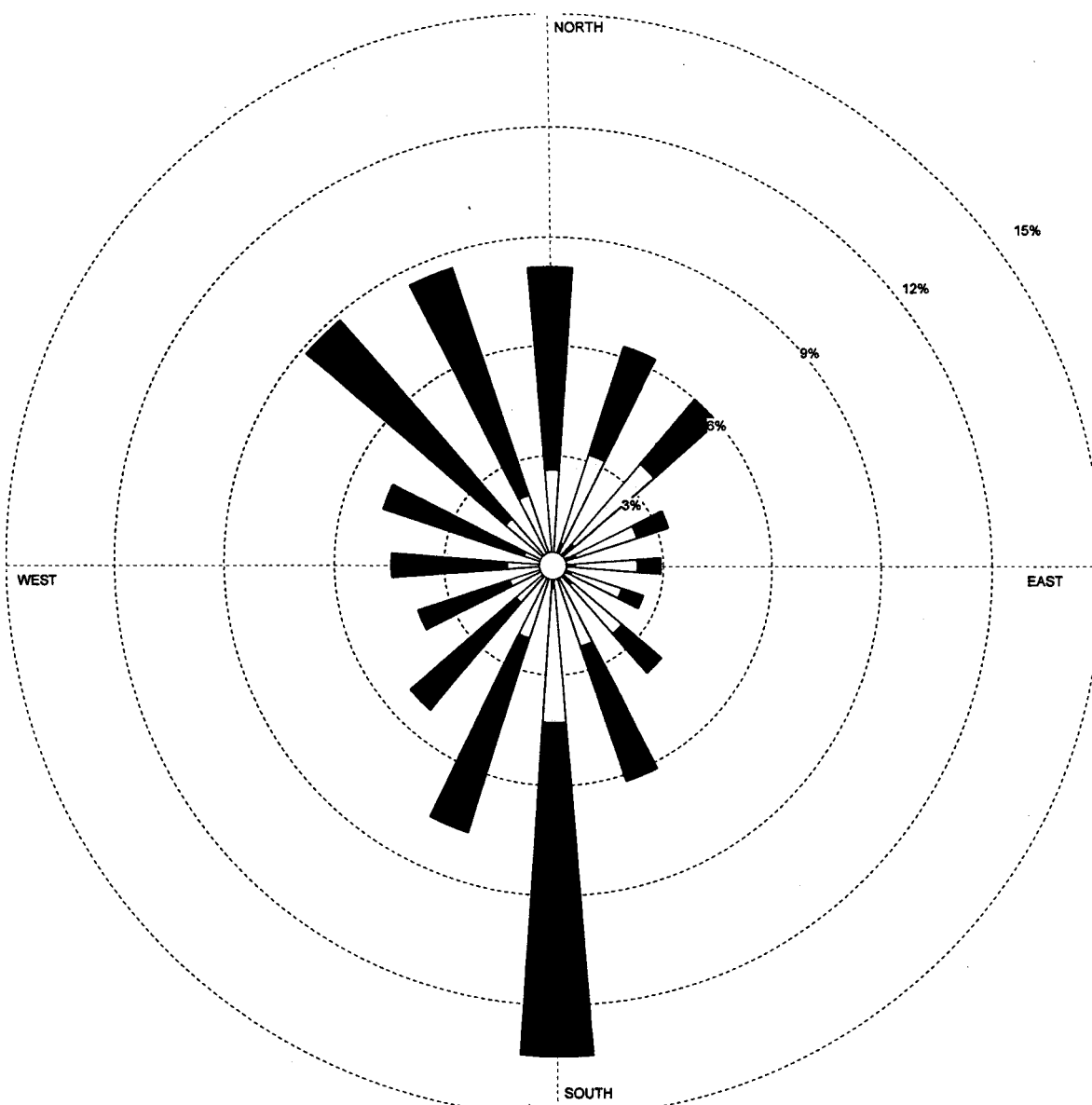
Station #13897 - NASHVILLE/METRO ARPT, TN




<b>Wind Speed (m/s)</b>  ■ > 11.06 ■ 8.49 - 11.06 ■ 5.40 - 8.49 ■ 3.34 - 5.40 ■ 1.80 - 3.34 ■ 0.51 - 1.80	MODELER	DATE <b>11/1/2002</b>	COMPANY NAME
	DISPLAY <b>Wind Speed</b>	UNIT <b>m/s</b>	COMMENTS
	AVG. WIND SPEED <b>4.30 m/s</b>	CALM WINDS <b>4.35%</b>	
	ORIENTATION <b>Direction (blowing from)</b>	PLOT YEAR-DATE-TIME <b>1961 Jan 1 - Jan 31 Midnight - 11 PM</b>	PROJECT/PLOT NO.

## WIND ROSE PLOT

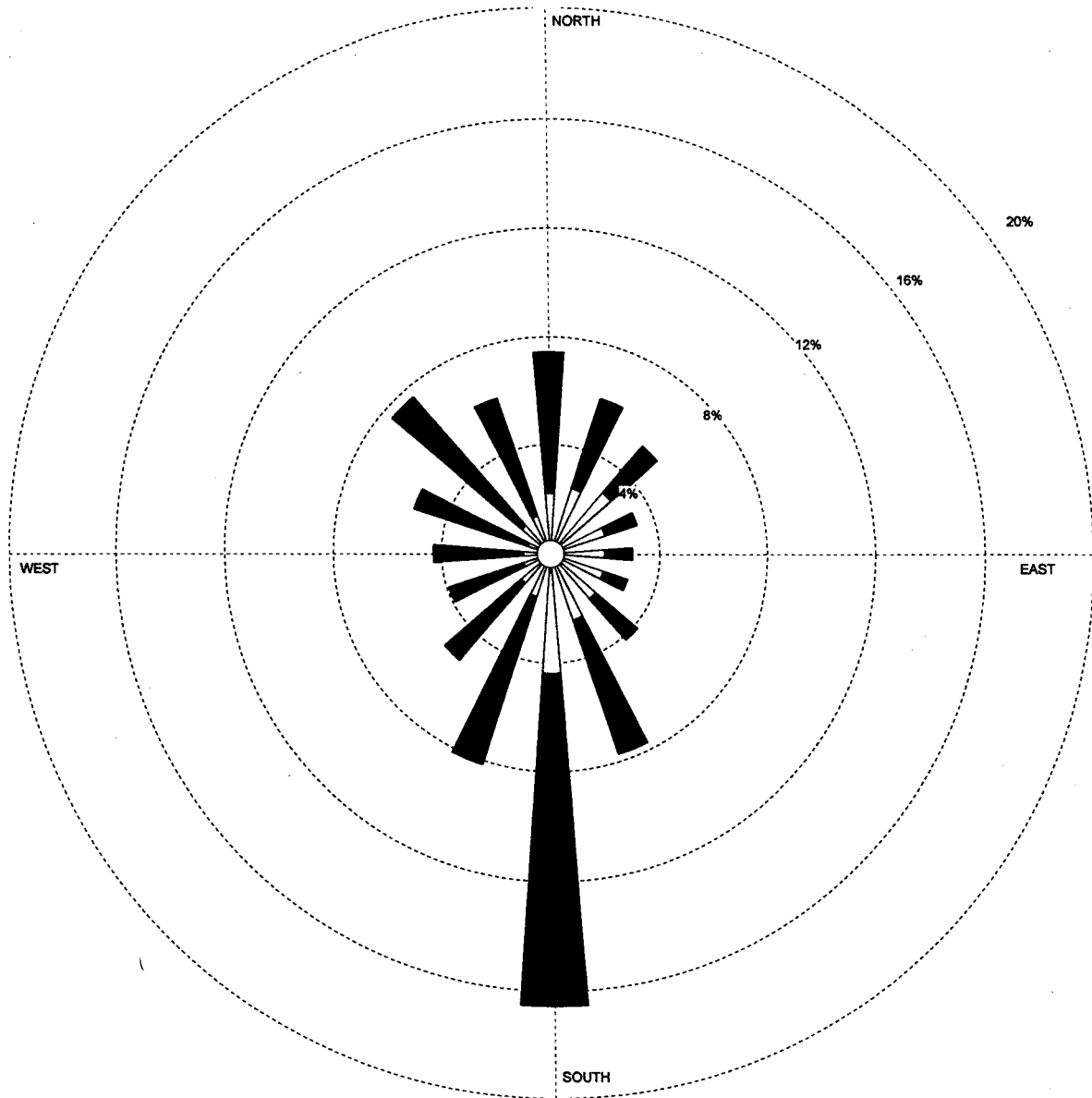
Station #13897 - NASHVILLE/METRO ARPT, TN




<b>Wind Speed (m/s)</b>  <ul style="list-style-type: none"> <li>&gt; 11.06</li> <li>8.49 - 11.06</li> <li>5.40 - 8.49</li> <li>3.34 - 5.40</li> <li>1.80 - 3.34</li> <li>0.51 - 1.80</li> </ul>	MODELER	DATE <b>11/1/2002</b>	COMPANY NAME
	DISPLAY <b>Wind Speed</b>	UNIT <b>m/s</b>	COMMENTS
	AVG. WIND SPEED <b>4.41 m/s</b>	CALM WINDS <b>3.60%</b>	
	ORIENTATION <b>Direction (blowing from)</b>	PLOT YEAR-DATE-TIME <b>1961 Feb 1 - Feb 29 Midnight - 11 PM</b>	PROJECT/PLOT NO.

WIND ROSE PLOT

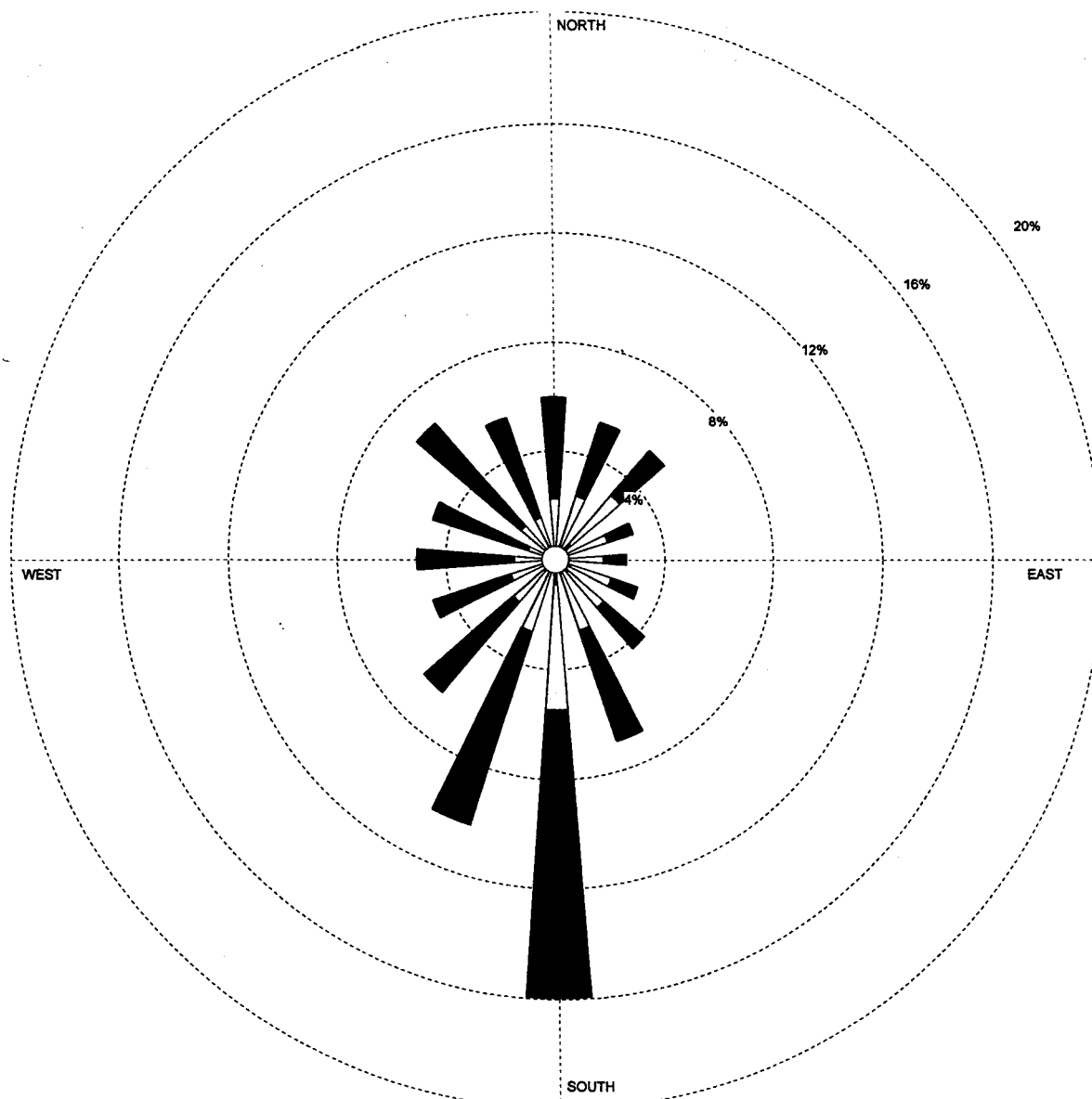
Station #13897 - NASHVILLE/METRO ARPT, TN




<b>Wind Speed (m/s)</b>  <ul style="list-style-type: none"> <li>&gt; 11.06</li> <li>8.49 - 11.06</li> <li>5.40 - 8.49</li> <li>3.34 - 5.40</li> <li>1.80 - 3.34</li> <li>0.51 - 1.80</li> </ul>	MODELER	DATE <b>11/1/2002</b>	COMPANY NAME
	DISPLAY <b>Wind Speed</b>	UNIT <b>m/s</b>	COMMENTS
	AVG. WIND SPEED <b>4.68 m/s</b>	CALM WINDS <b>3.16%</b>	
	ORIENTATION <b>Direction (blowing from)</b>	PLOT YEAR-DATE-TIME <b>1961 Mar 1 - Mar 31 Midnight - 11 PM</b>	PROJECT/PLOT NO.

## WIND ROSE PLOT

Station #13897 - NASHVILLE/METRO ARPT, TN

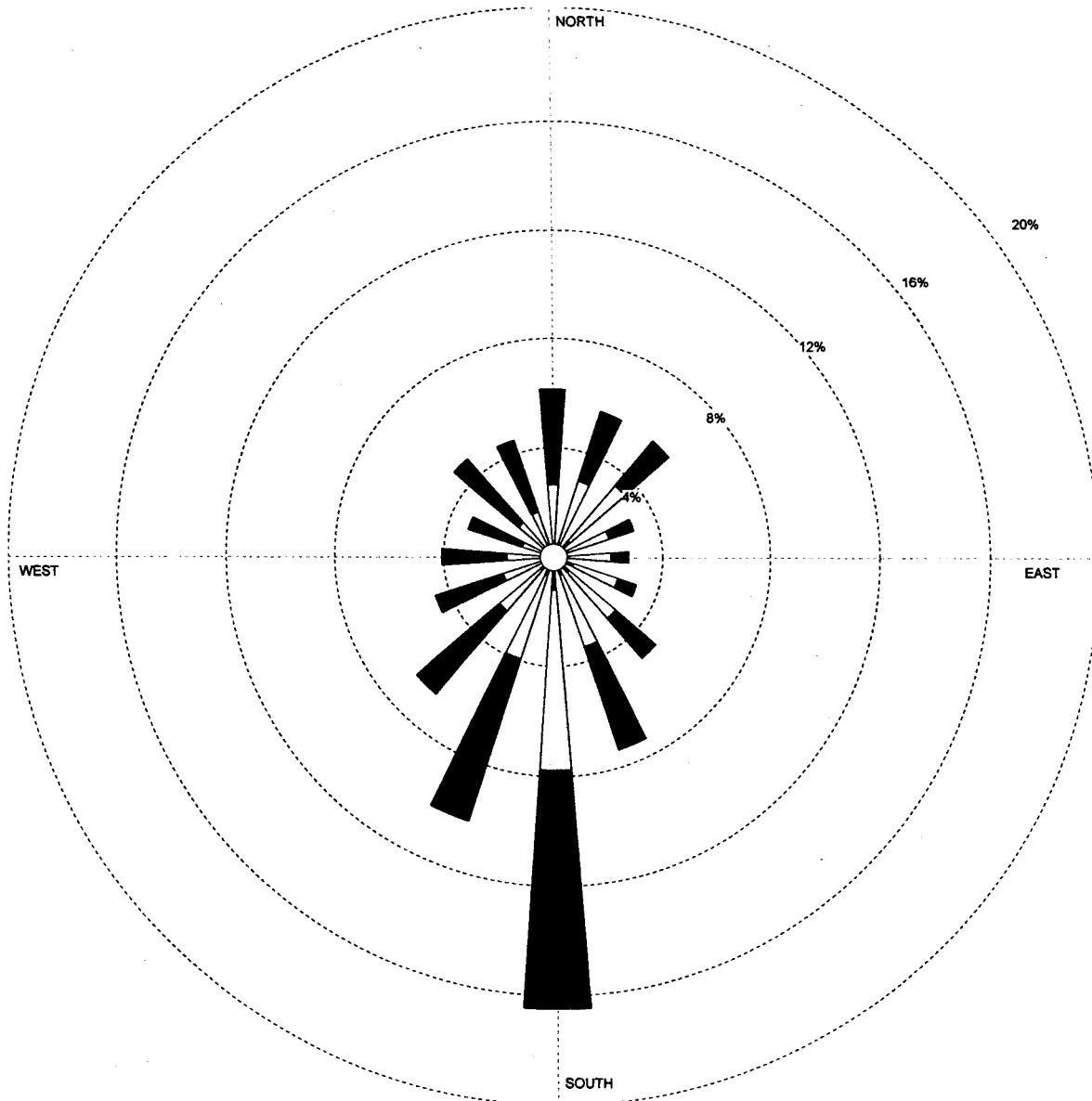



<b>Wind Speed (m/s)</b> 	MODELER	DATE <b>11/1/2002</b>	COMPANY NAME
	DISPLAY <b>Wind Speed</b>	UNIT <b>m/s</b>	COMMENTS
	AVG. WIND SPEED <b>4.39 m/s</b>	CALM WINDS <b>4.31%</b>	
	ORIENTATION <b>Direction (blowing from)</b>	PLOT YEAR-DATE-TIME <b>1961 Apr 1 - Apr 30 Midnight - 11 PM</b>	PROJECT/PLOT NO.



WIND ROSE PLOT

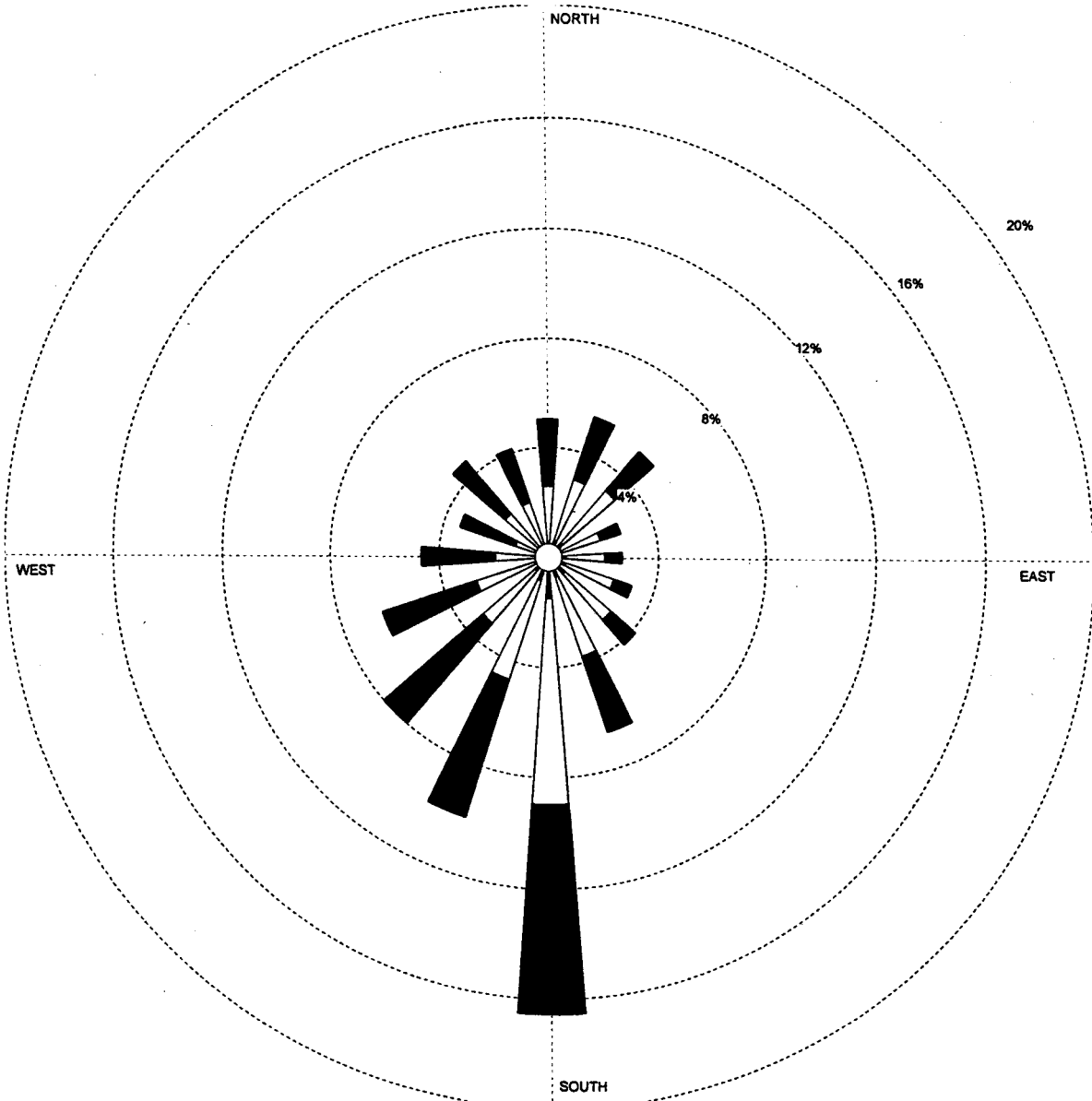
Station #13897 - NASHVILLE/METRO ARPT, TN




<b>Wind Speed (m/s)</b>  <ul style="list-style-type: none"> <li>&gt; 11.06</li> <li>8.49 - 11.06</li> <li>5.40 - 8.49</li> <li>3.34 - 5.40</li> <li>1.80 - 3.34</li> <li>0.51 - 1.80</li> </ul>	MODELER	DATE <b>11/1/2002</b>	COMPANY NAME
	DISPLAY <b>Wind Speed</b>	UNIT <b>m/s</b>	COMMENTS
	AVG. WIND SPEED <b>3.81 m/s</b>	CALM WINDS <b>6.97%</b>	
	ORIENTATION <b>Direction (blowing from)</b>	PLOT YEAR-DATE-TIME <b>1961 May 1 - May 31 Midnight - 11 PM</b>	PROJECT/PLOT NO.

## WIND ROSE PLOT

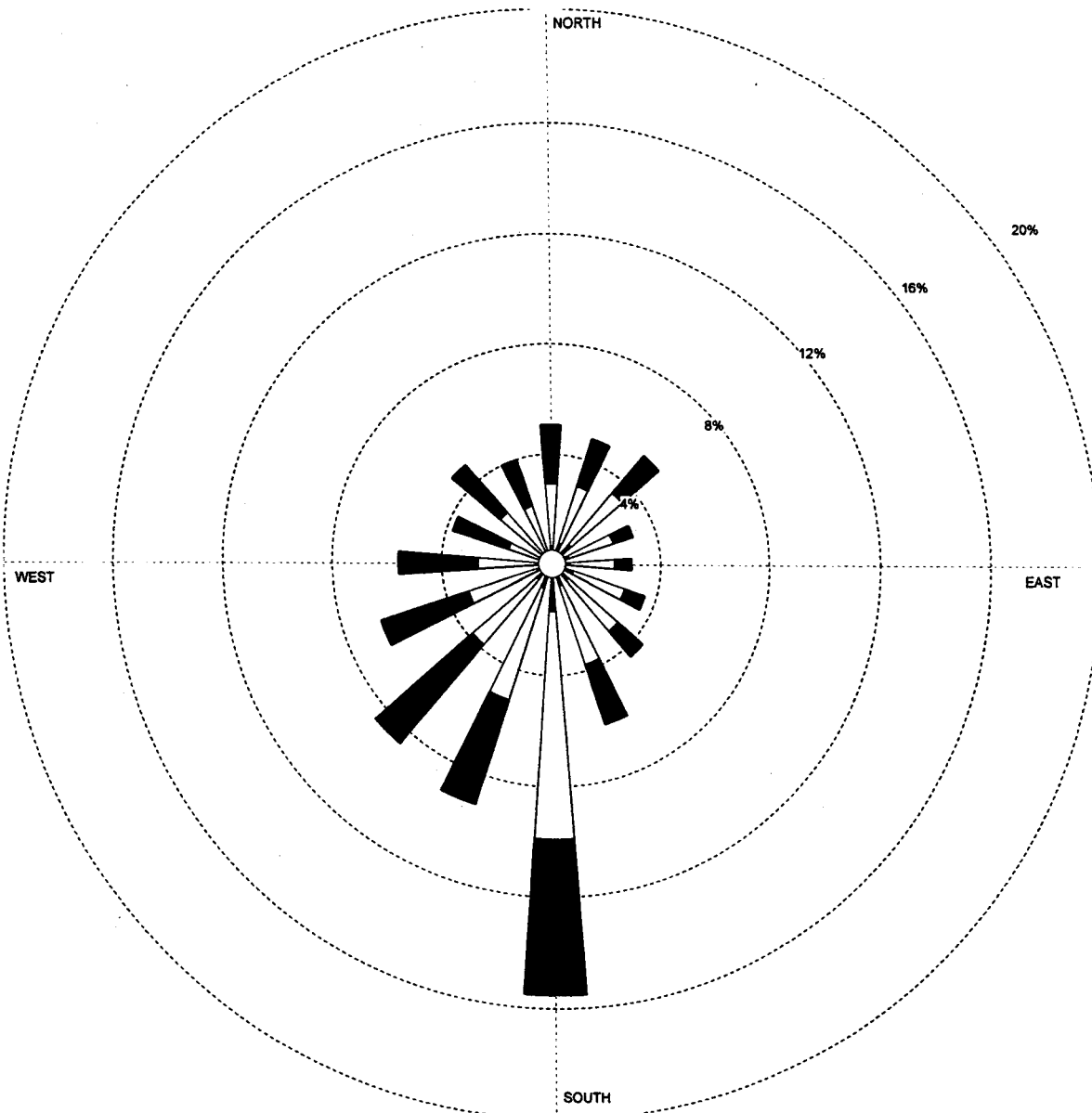
Station #13897 - NASHVILLE/METRO ARPT, TN




<b>Wind Speed (m/s)</b>  > 11.06 8.49 - 11.06 5.40 - 8.49 3.34 - 5.40 1.80 - 3.34 0.51 - 1.80	MODELER	DATE <b>11/1/2002</b>	COMPANY NAME
	DISPLAY <b>Wind Speed</b>	UNIT <b>m/s</b>	COMMENTS
	AVG. WIND SPEED <b>3.55 m/s</b>	CALM WINDS <b>7.39%</b>	
	ORIENTATION <b>Direction (blowing from)</b>	PLOT YEAR-DATE-TIME <b>1961 Jun 1 - Jun 30 Midnight - 11 PM</b>	PROJECT/PLOT NO.

## WIND ROSE PLOT

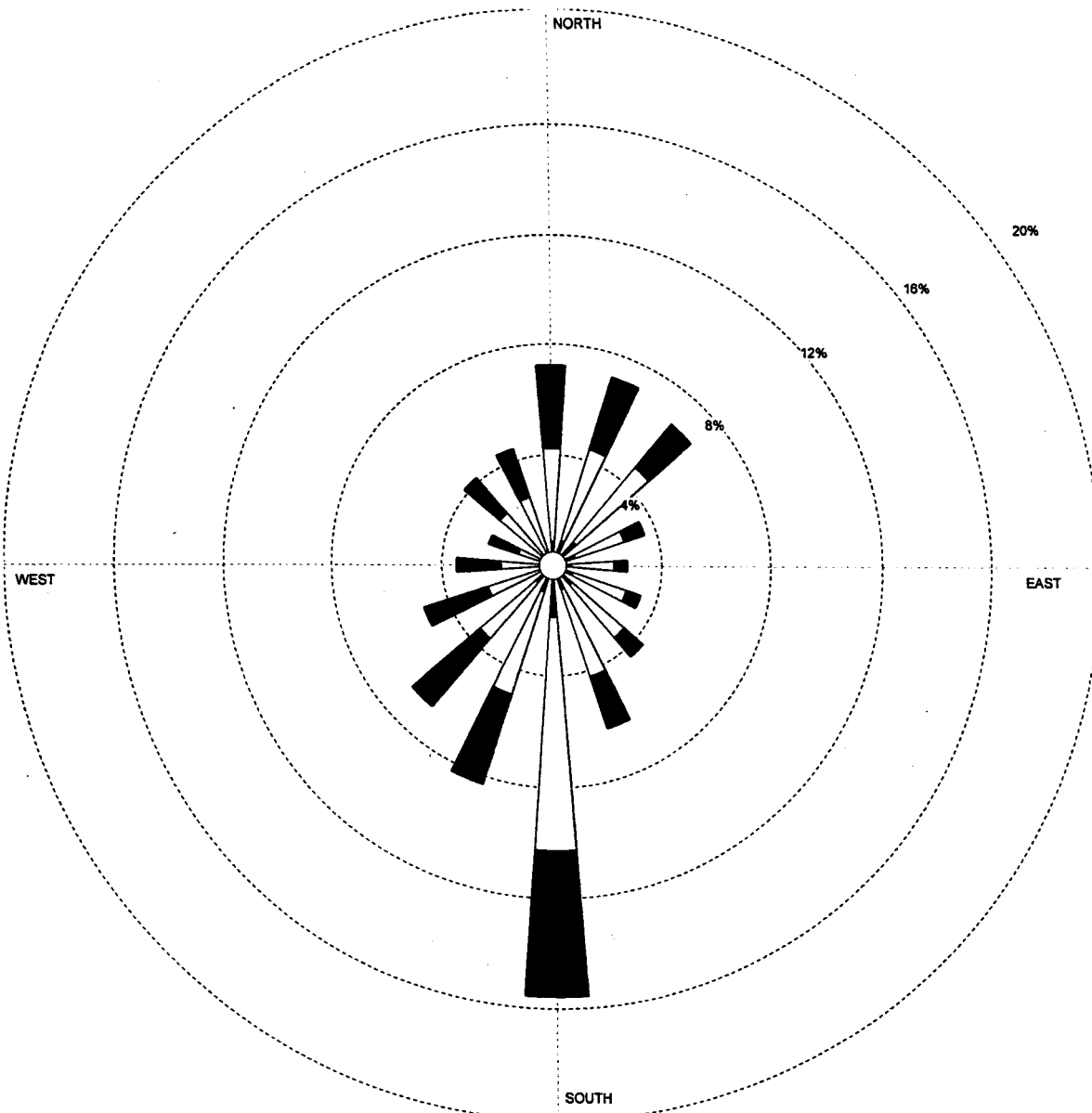
Station #13897 - NASHVILLE/METRO ARPT, TN




<b>Wind Speed (m/s)</b> 	MODELER	DATE <b>11/1/2002</b>	COMPANY NAME
	DISPLAY <b>Wind Speed</b>	UNIT <b>m/s</b>	COMMENTS
	AVG. WIND SPEED <b>3.29 m/s</b>	CALM WINDS <b>6.94%</b>	
	ORIENTATION <b>Direction (blowing from)</b>	PLOT YEAR-DATE-TIME <b>1961 Jul 1 - Jul 31 Midnight - 11 PM</b>	
			PROJECT/PLOT NO.

## WIND ROSE PLOT

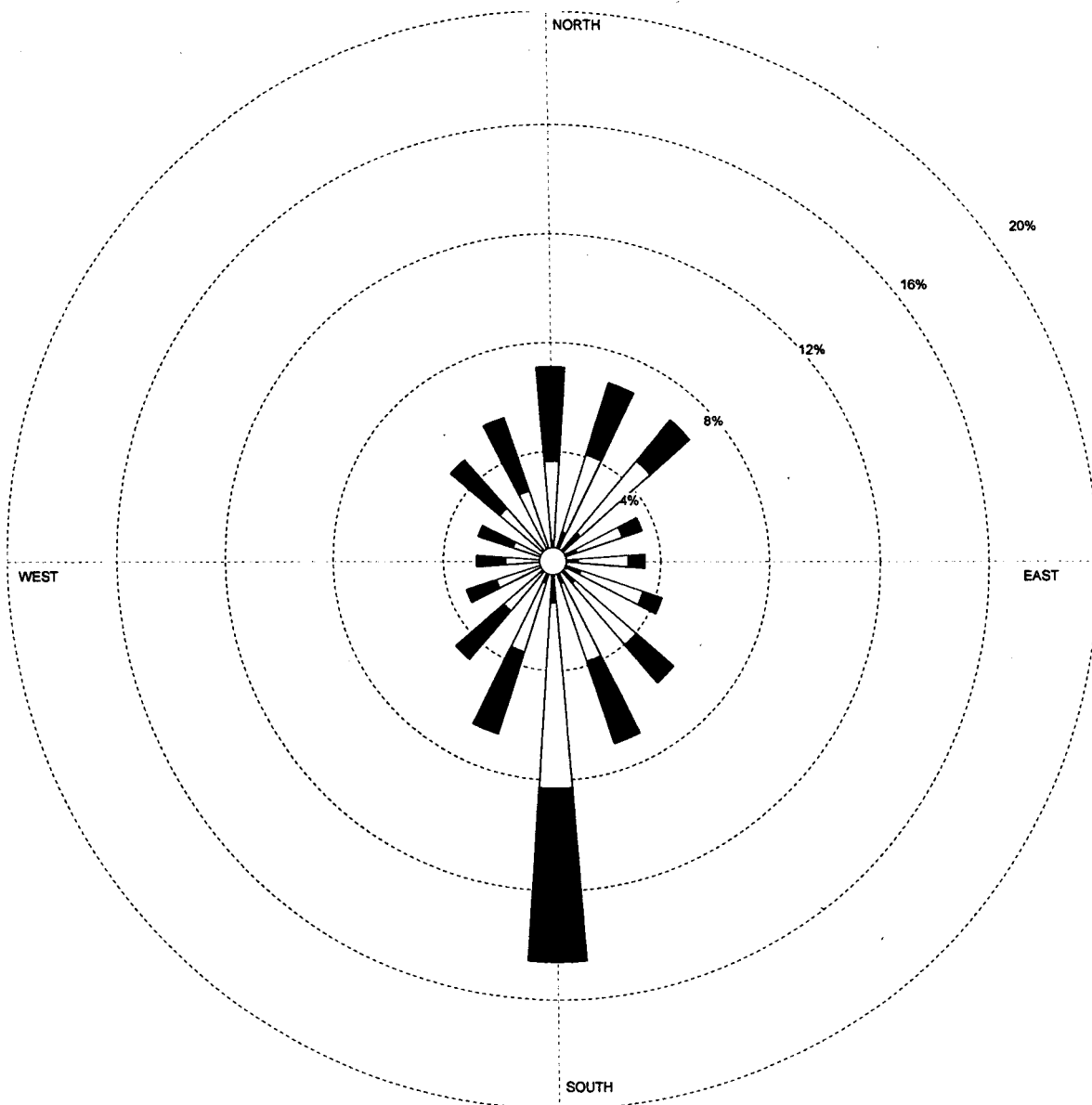
Station #13897 - NASHVILLE/METRO ARPT, TN



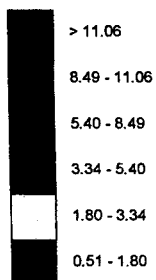
<b>Wind Speed (m/s)</b> 	MODELER	DATE <b>11/1/2002</b>	COMPANY NAME
	DISPLAY <b>Wind Speed</b>	UNIT <b>m/s</b>	COMMENTS
	AVG. WIND SPEED <b>3.14 m/s</b>	CALM WINDS <b>8.58%</b>	
	ORIENTATION <b>Direction (blowing from)</b>	PLOT YEAR-DATE-TIME <b>1961 Aug 1 - Aug 31 Midnight - 11 PM</b>	PROJECT/PLOT NO.

WIND ROSE PLOT

Station #13897 - NASHVILLE/METRO ARPT, TN



Wind Speed (m/s)



MODELER

DISPLAY

**Wind Speed**

AVG. WIND SPEED

**3.26 m/s**

ORIENTATION

**Direction  
(blowing from)**

DATE

**11/1/2002**

UNIT

**m/s**

CALM WINDS

**9.84%**

PLOT YEAR-DATE-TIME

**1961  
Sep 1 - Sep 30  
Midnight - 11 PM**

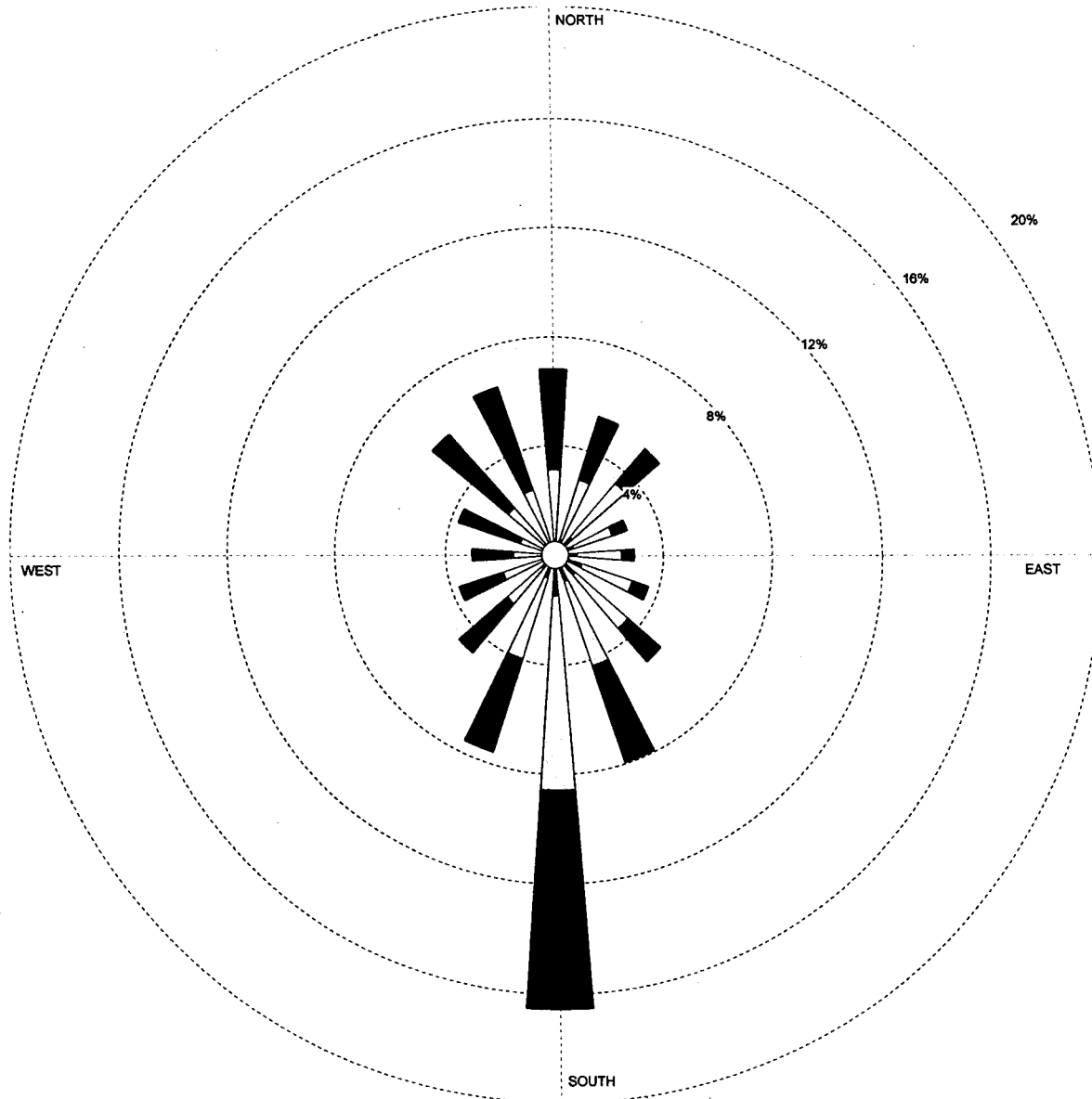
COMPANY NAME

COMMENTS

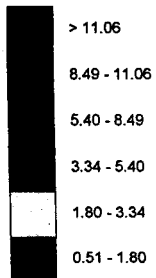
PROJECT/PLOT NO.

## WIND ROSE PLOT

Station #13897 - NASHVILLE/METRO ARPT, TN



Wind Speed (m/s)



Modeler

Display

Wind Speed

Avg. Wind Speed

3.54 m/s

Orientation

Direction  
(blowing from)

Date

11/1/2002

Unit

m/s

Calm Winds

8.63%

Plot Year-Date-Time

1961  
Oct 1 - Oct 31  
Midnight - 11 PM

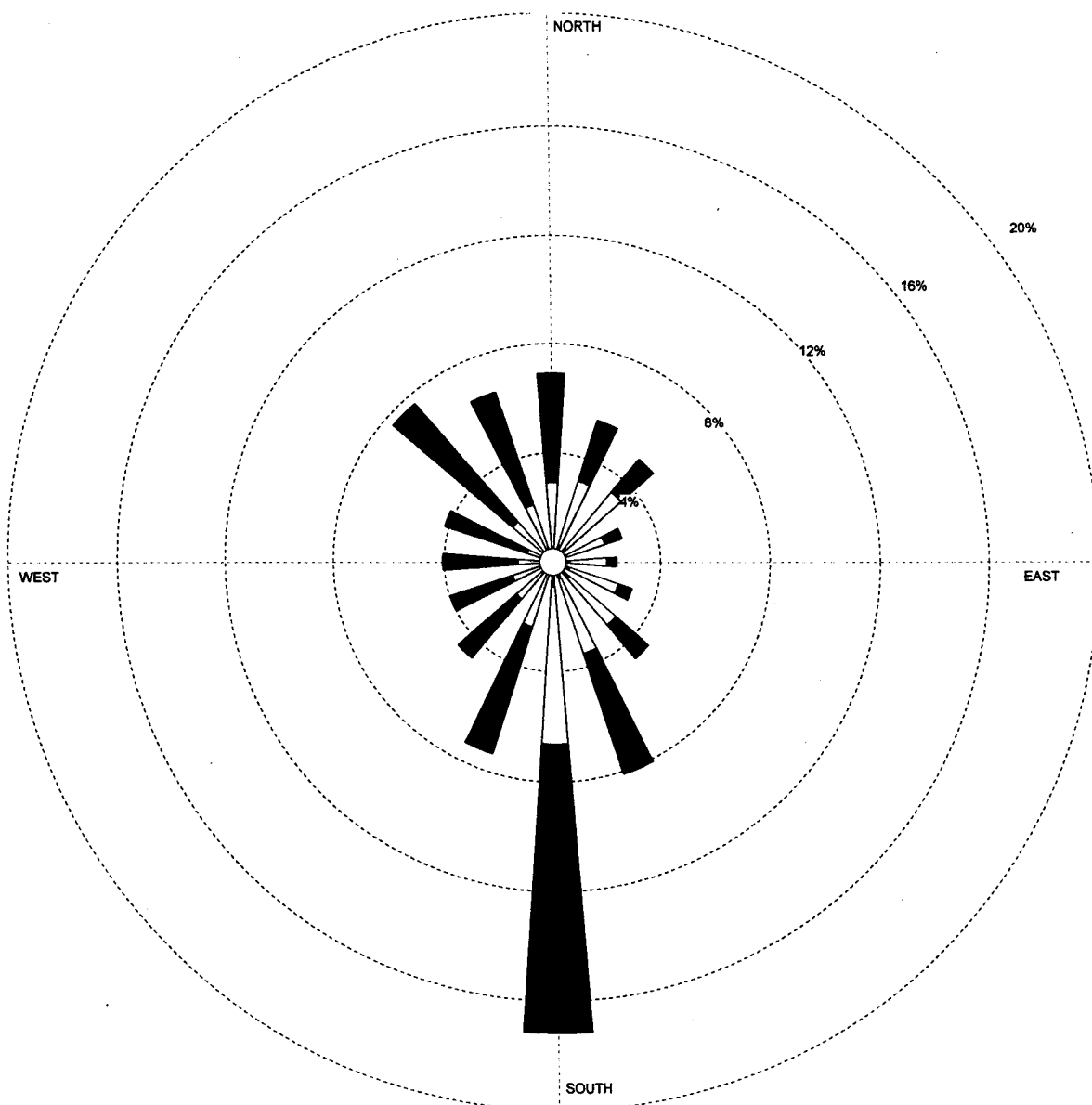
Company Name

Comments

Project/Plot No.

## WIND ROSE PLOT

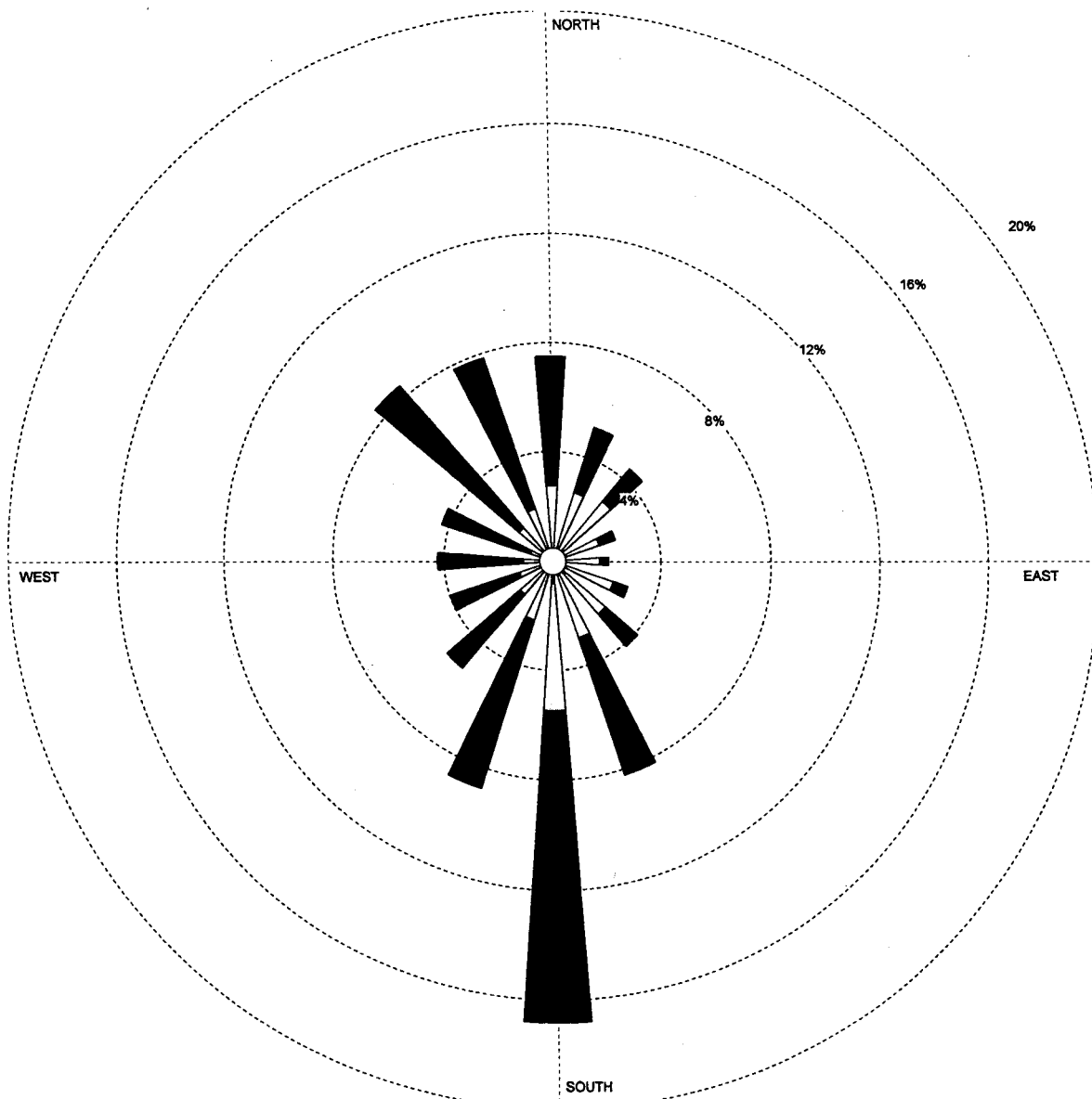
Station #13897 - NASHVILLE/METRO ARPT, TN




<b>Wind Speed (m/s)</b>   0.51 - 1.80 1.80 - 3.34 3.34 - 5.40 5.40 - 8.49 8.49 - 11.06 > 11.06	MODELER	DATE <b>11/1/2002</b>	COMPANY NAME
	DISPLAY <b>Wind Speed</b>	UNIT <b>m/s</b>	COMMENTS
	AVG. WIND SPEED <b>4.05 m/s</b>	CALM WINDS <b>6.14%</b>	
	ORIENTATION <b>Direction (blowing from)</b>	PLOT YEAR-DATE-TIME <b>1961 Nov 1 - Nov 30 Midnight - 11 PM</b>	PROJECT/PLOT NO.

## WIND ROSE PLOT

Station #13897 - NASHVILLE/METRO ARPT, TN



<b>Wind Speed (m/s)</b>  > 11.06 8.49 - 11.06 5.40 - 8.49 3.34 - 5.40 1.80 - 3.34 0.51 - 1.80	MODELER	DATE <b>11/1/2002</b>	COMPANY NAME
	DISPLAY <b>Wind Speed</b>	UNIT <b>m/s</b>	COMMENTS
	AVG. WIND SPEED <b>4.35 m/s</b>	CALM WINDS <b>3.62%</b>	
	ORIENTATION <b>Direction (blowing from)</b>	PLOT YEAR-DATE-TIME <b>1961 Dec 1 - Dec 31 Midnight - 11 PM</b>	PROJECT/PLOT NO.

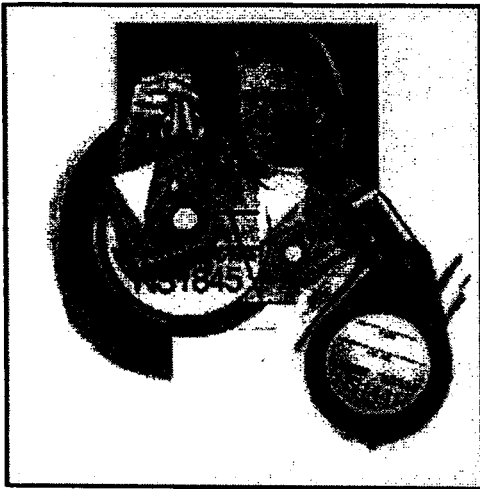


**Attachment 2**  
**3M's Air Monitoring Guide**

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# **3M Air Monitoring Guide**

3500/3510, 3520/3530, 3550/3551



## Instructions for Use

**Important! You must read all instructions completely before proceeding with any monitoring.**

### General Product Description

The 3M diffusion monitor is a sampling device designed to measure average concentrations of certain contaminants over a measured time interval. It can be used for either personal or area monitoring. As a personal monitor, it is worn near the breathing zone of individuals exposed to potentially hazardous environments. When used as an area monitor, hang it away from walls, corners, table tops, or other regions where the air movement in the room may be limited.

Sampling times will vary according to contaminant concentrations and environmental conditions such as humidity. Sampling times should be selected for comparison with appropriate exposure limits. For complete details on appropriate compounds and sampling times, refer to *the Organic Vapor Sampling and Analysis Guide* or contact OH&ESD Technical Service at 1-800-243-4630, or your local 3M facility.

Store in an area free of organic vapors and/or ethylene oxide.  
**Shelf life is 18 months.**

Good industrial hygiene practice indicates that a blank monitor be included with each set of samples to check for any contamination of the samples. The blank is a monitor which has been handled in the same manner as the sample monitors, but has not been exposed to the atmosphere in the area being monitored.

### Product Information

**3500 and 3510\* organic vapor diffusion monitors** contain a single charcoal adsorbent pad. The 3500 monitor is designed to be analyzed by the user or by an independent laboratory. The 3510 includes a prepaid analysis for up to three compounds per monitor.

**3520\* and 3530 organic vapor diffusion monitors** contain two charcoal adsorbent pads for increased capacity. The 3520 monitor is designed to be analyzed by the user or by an independent laboratory. The 3530 includes a prepaid analysis for up to three compounds per monitor.

Please see current technical data bulletins for accuracy of the organic vapor monitors ([www.3M.com/occsafety](http://www.3M.com/occsafety)).

**3550\* and 3551 ethylene oxide diffusion monitors** contain a single treated charcoal adsorbent pad. The 3550 includes a prepaid analysis. The 3551 monitor is designed to be analyzed by the user or by an independent laboratory. Accuracy meets current OSHA requirements for 8 hour sampling which are +/- 25% at 1.0 ppm, +/- 35% at 0.5 ppm. Also meets accuracy requirements for short-term exposure limit (STEL) sampling of +/- 35% at 5.0 ppm. The 3550/3551 must be analyzed within 4 weeks after sampling.

3M Monitor analysis services will be provided by an American Industrial Hygiene Association (AIHA) Accredited Laboratory. Confidentiality of customer analysis results will be maintained. The list of the compounds which are included in the prepaid analysis service for the 3510 and 3530 monitors is given in the table below. Up to 3 compounds may be selected from this list for analysis. A written report will be quickly returned to document the results of the analysis.

\*3510, 3520 and 3550 not sold in Canada.

†Acetone (2) (c)  
Acetonitrile (2) (c)  
Acrylonitrile (8)  
Allyl Alcohol (8)  
Amyl Acetate (8)  
n-Amyl Alcohol  
s-Amyl Alcohol  
Benzene (8)  
Benzyl Chloride (8)  
Bromoform (8)  
1-Bromopropane (m)  
n-Butyl Acetate (8)  
s-Butyl Acetate (8)  
t-Butyl Acetate (8)  
Butyl Acrylate (8)  
n-Butyl Alcohol (8)  
s-Butyl Alcohol (8)  
t-Butyl Alcohol (8)  
Butyl Cellosolve Acetate  
Butyl Cellosolve (8)  
n-Butyl Glycidyl Ether (8)  
p-tert Butyl Toluene (8)  
Camphor (8)  
Carbon Tetrachloride (8)  
Cellosolve (8)  
Cellosolve Acetate (8)  
Chlorobenzene (8)  
Chloroform (8)  
o-Chlorostyrene (8)  
o-Chlorotoluene (8)  
Cumene (8)  
Cyclohexane (6)  
Cyclohexanol (8)  
Cyclohexanone (8)  
Cyclohexene (8)  
n-Decane  
Diacetone Alcohol (8)  
o-Dichlorobenzene (8)  
p-Dichlorobenzene (8)  
trans-1,2-Dichloroethylene (6)  
Diisobutyl Ketone (DIBK) (8)  
p-Dioxane (8)  
Dipropylene Glycol Methyl

Ether Acetate  
Enflurane (8)  
Epichlorohydrin (8)  
Ethoxy Perfluorobutane (HFE-7200)  
Ethyl Acetate (6)  
Ethyl Acrylate (8)  
Ethyl Benzene (8)  
Ethylene Chlorohydrin (8)  
Ethylene Dichloride (EDC) (8)  
Ethyl Ether (4) (c)  
Halothane (8)  
n-Heptane (8)  
n-Hexane (8)  
iso-Amyl Acetate (8)  
iso-Butyl Alcohol (8)  
Isoflurane (Forane)  
Isopar G  
Isophorone (8)  
Isopropyl Acetate (7)  
Isopropyl Alcohol (m) (c)  
Mesitylene (8)  
Mesityl Oxide (8)  
Methoxy Perfluorobutane (HFE-7100)  
Methyl Acrylate (8)  
Methyl t-Butyl Ether (MTBE) (8)  
Methyl Butyl Ketone (MBK) (8)  
Methyl Cellosolve (8)  
Methyl Cellosolve Acetate (8)  
Methylene Chloride (m) (3530 only)  
Methyl Ethyl Ketone (MEK) (8)  
Methyl Isobutyl Ketone (MIBK) (8)  
Methyl Methacrylate (8)  
Methyl Propyl Ketone (8)  
Naptha (VM&P) (8)  
n-Octane (8)  
Perchloroethylene (8)  
Phenyl Ether (8)  
n-Propyl Acetate (8)  
n-Propyl Alcohol (6)  
Propylene Dichloride (8)  
Propylene Glycol Mono Methyl Ether (8)  
Propylene Glycol Mono Methyl Ether Acetate  
Stoddard Solvent (8)  
Styrene (8)  
1,1,2,2-Tetrachloroethane (8)  
Tetrahydrofuran (8)  
Toluene (8)  
1,1,1-Trichloroethane (Methyl Chloroform) (m)  
Trichloroethylene (8)  
1,1,2-Trichloro-1,2,2-trifluoroethane (1) (c)  
† Vinyl Acetate (8)

Vinyl Toluene (8)  
Xylene (8)  
Total Hydrocarbons as n-Hexane

The number in parenthesis is the recommended sampling period in hours. This time has been estimated using the capacity of the 3510 organic vapor monitor, a relative humidity of <50% and the 1998 ACGIH TLVs. Use of the 3530 allows the sampling time to increase.

(c) Because of their high vapor pressures (low boiling points), the (c) compounds are best sampled initially with the 3520 or 3530 monitor (with back-up section). Subsequent sampling may be done with the 3500/3510 monitor if determined, by 3520 results, that contaminant concentrations are within the 3500/3510 capacity limits.

†NOTE: certain compounds (e.g. acetone, methyl ethyl ketone, vinyl acetate, etc.) may show a decreased recovery when sampled in high relative humidity. Refrigerate and/or expedite for analysis to help ensure accurate results.(m) See technical bulletin.

### Sampling Instructions

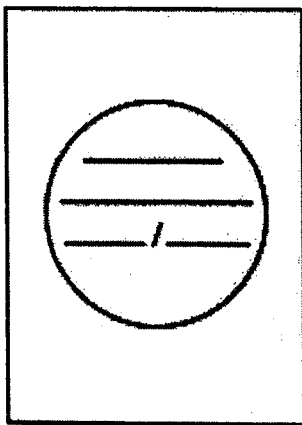


Diagram 1



Diagram 2

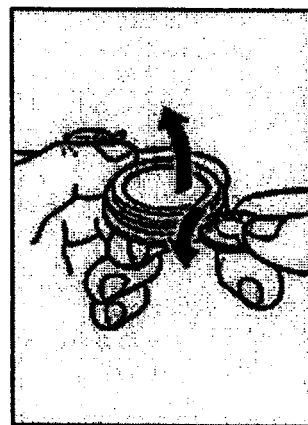


Diagram 3

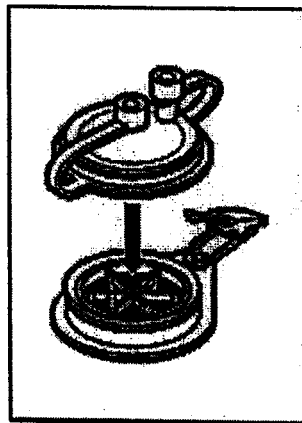


Diagram 4

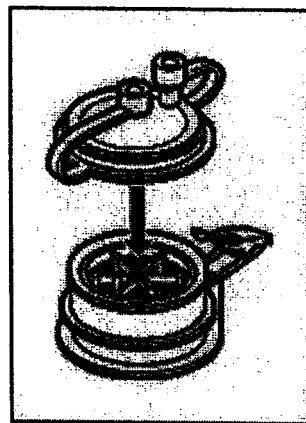


Diagram 5

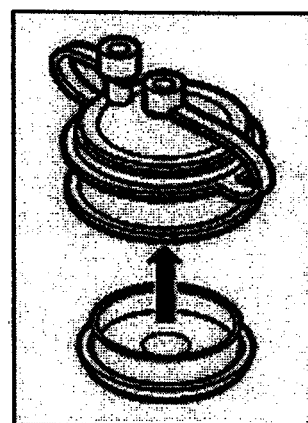


Diagram 6

1. Remove the diffusion monitor from the can.
2. Before monitoring, record the following information in your data log and on the enclosed form: 1) monitor serial number, 2) sampling date, 3) employee or area I. D., 4) temperature and relative humidity, 5) compounds to be analyzed.

3. Record the date, employee or area ID and sampling start time on the monitor label (diagram 1). **DO NOT REMOVE WHITE FILM AND PLASTIC RING.**
4. Monitor can be used as an area or personal sampler. For personal sampler attach the monitor near employee breathing zone (diagram 2). When used as an area monitor, hang it away from walls, corners, table tops, or other regions where the air movement in the room may be limited.
5. After sampling period is ended, remove plastic ring and white film from the monitor (diagram 3). **MOVE TO STEP 6 IMMEDIATELY.**
6. **3500/3510 and 3550/3551:** Snap elution cap (with plugs) onto main monitor body (diagram 4). Be sure the two port plugs are secured. Record final sampling time on the back of monitor. Monitor is now ready for shipment.

**3520/3530:** Snap elution cap (with plugs) onto the top of the primary body (diagram 5). Separate the primary body and secondary body sections. Snap the bottom cup (no plugs) into the bottom of the primary section (diagram 6). Snap elution cap on the secondary body. Monitor is now ready for shipment.

**NOTE:** The primary and secondary sections should have the same identification numbers.

7. Return monitor and short plastic straw to can and close with plastic lid provided.
8. The 3500, 3520 or 3551 monitors do not include prepaid analysis; therefore, **DO NOT RETURN TO 3M FOR ANALYSIS.** A list of AIHA accredited laboratories is printed annually in the American Industrial Hygiene Association Journal. A detailed analysis procedure is available from 3M. For 3510, 3530 or 3550 monitors, send monitor plus completed analysis request form to:

B.I.C. – Chemistry Department  
11001 Hampshire Avenue South  
Minneapolis, MN 55438

**NOTE:** Certain compounds (e.g. acetone, methyl ethyl ketone, vinyl acetate, etc.) may show a decreased recovery when sampled in high relative humidity. Refrigerate and/or expedite for analysis to help ensure accurate results.

**FOR MORE INFORMATION**

**In United States, contact:**

Internet: [www.3M.com/occsafety](http://www.3M.com/occsafety)

Technical Assistance: 1-800-243-4630

**For other 3M products:**

1-800-3M-HELPS or 1-651-737-6501

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